Listing of Claims:

1. (Currently Amended) ~~Method~~ A method for ~~integrity~~ checking integrity of messages transmitted during a connection between a first party and a second party, comprising:

~~in which method an authentication value is calculated for a message,~~

~~characterized in that the method comprises steps, in which~~

specifying a first value at the first party, a second value at least partly at the first party and a count value at least partly at the second party to calculate an authentication value of a message, the first value being valid for one connection between the first party and the second party only;

transmitting the message and calculated authentication value from the first party to the second party;

calculating a second authentication value at the second party based on the received message;

comparing the calculated authentication value with the second authentication value to determine whether the authentication values match;

accepting the message if the authentication values match;

wherein the authentication values are ~~value of a message is~~ calculated based on the [[basis of - the]] message, [[- a]] the first value specified by the first party[[, said first value being valid for one connection only, - a]] and the counter value at least partly specified by the second party.

2. (Currently Amended) ~~A~~ The method ~~according to~~ of claim 1, ~~characterized in that~~ wherein said first party is a cellular telecommunication network and said second party is a mobile station.

3. (Canceled)

4. (Currently Amended) ~~A~~ The method ~~according to~~ of claim 1, ~~characterized in that~~ wherein said first value is a pseudorandom value.

5. (Currently Amended) ~~A~~ The method ~~according to~~ of claim 2, ~~characterized in that~~ wherein the mobile station specifies an initial value for the counter value.

6. (Currently Amended) ~~A~~ The method ~~according to~~ of claim 2, ~~characterized in that~~ wherein the mobile station specifies an initial value which is combined with a counter value for producing a third value.

7. (Currently Amended) ~~A~~ The method ~~according to~~ of claim 5, ~~characterized in that~~ wherein the mobile station uses a value previously stored in the SIM card of the mobile station in specifying said initial value.

8. (Currently Amended) ~~A~~ The method ~~according to~~ of claim 1, ~~characterized in that~~ wherein said cellular telecommunication network is an ~~UMTS~~ universal mobile telecommunications system network, and said first value is specified by a radio network controller.

9. (New) The method of claim 1, wherein if the authentication values fail to match the message is rejected.